

# Microeconometrics

Spring 2015

Syllabus

Time: Tuesdays and Thursdays, 9h30am to 10h45am

Location: Gardner 209

Instructor: Valentin Verdier

email: vverdier@email.unc.edu

Office: Gardner 208B

Office hour: Tuesdays 5-6pm or by appointment

Midterm date: March 5th

Final date: Between April 27th and May5th

## **Course Objectives:**

This course has two main objectives: Provide an overview of some of the key methodological advances in the conduct of empirical research in microeconomics, and train students to be comfortable with the language used in econometric research. The course looks at some topics that I think are either fundamental or of particular interest. For each topic I will try to summarize the state of literature, using the textbook as main resource, and then delve in more detail into one or two specific articles from the field of econometrics. As a result, I hope that by the end of the semester you grasp some of the key principles used for the analysis of microeconomic data, but also are able to educate yourself independently on the current state of research in econometrics, which I think is an important prerequisite for doing quality empirical work.

## **Grade:**

The grade will come from a midterm and final, an in-class 20 minutes presentation on one of the papers in the syllabus or another paper that you have cleared with me, and a brief summary on another paper in the syllabus, or another paper that you have cleared with me. We will schedule presentations and summaries during the first lecture.

**Note:**

Feel free to let me know if there are some topics you would like to talk about during class that are not currently in the syllabus. Also feel free to contact me with any question or concern, in particular I tried to structure a mildly ambitious syllabus but I do not want to overdo it and have a confusing course that loses most students. Therefore, I encourage you to give me feedback as we go along.

**Topics:**

Week 1: Introduction: Objects of interest in empirical microeconomics

- W: ch. 1
- Articles: Structural vs. reduced form debate, Heckman and Urzua JE 2010, Deaton JEL 2010, Imbens JEL 2010, Angrist and Pischke JEP 2010, Nevo and Whinston JEP 2010

Week 2: Single equation regression models

- W: ch. 4
- Articles: White IER 1980 and White Econometrica 1980

**Instrumental Variables**

Week 3: Linear Models

- W: ch. 5,8,9
- Articles: Haavelmo 1943 (Complementary reading: Econometric Theory 2014 special issue)

Week 4: Regression Discontinuity Design

- W: 21.5
- Articles: Calonico, Cattaneo, Titiunik Econometrica 2014

Week 5: Heterogeneity and non-linear models

- W: 15.7.2, 15.7.3, 21.4
- Articles: Heckman and Vytlacil, *Econometrica* 2005

### **Longitudinal Data**

Week 6: Linear and non-linear panel data models

- W: ch. 10, ch. 11, 15.8
- Articles: Chernozhukov, Fernandez-Val, Hahn and Newey *Econometrica* 2013 (Complementary reading: Chamberlain 1992, Graham and Powell 2013)

Week 7: Dynamic Models of Panel Data

- W: 11.6
- Articles: Arellano and Bond *Review of Economic Studies* 1991, Wooldridge *Journal of Applied Econometrics* 2005

Week 8: Large n Large T Asymptotics

- Articles: Alvarez and Arellano *Econometrica* 2003, Kim and Sun *Journal of Econometrics* 2013

### **Review and Midterm**

Week 9

### **Robust Estimation and Inference**

Week 10: M-Estimation

- W: ch. 12

Week 11: Efficiency vs. robustness trade-off for estimation and robust inference

- W: 4.2.3, 7.8.4, 9.3.1, 10.4.2, 10.6.2, ch. 13, ch. 14
- Articles: Gouriéroux, Monfort and Trognon *Econometrica* 1984

Week 12: Optimal Instruments

- Articles: Chamberlain Journal of Econometrics 1987, Econometrica 1992

### **Cross-Sectional Dependence**

Week 13: Asymptotic Framework

- Articles: Conley Journal of Econometrics 1999, Jenish and Prucha Journal of Econometrics 2009, 2012

Week 14: Inference

- Articles: Kelejian and Prucha Journal of Econometrics 2007, Kim and Sun Journal of Econometrics 2011

Week 15: Social Interactions

- Articles: Manski Review of Economic Studies 1993, Graham Econometrica 2008, Goldsmith-Pinkham and Imbens JBES 2013